

WHAT IS CLAIMED IS:

1. An exchange system which comprises a telephone  
exchange apparatus to which at least one terminal  
device is connected, and a computer apparatus having  
5 a processing function of media information, comprising:

a media information communication path which  
connects the telephone exchange apparatus and the  
computer apparatus, and has at least one media  
information channel pre-assigned to the terminal  
10 device;

media information communication means, in each of  
the telephone exchange apparatus and the computer  
apparatus, for communicating the media information  
between the telephone exchange apparatus and the  
15 computer apparatus via the media information channel of  
said media information communication path, when an  
execution request of a service associated with exchange  
using the media information is generated; and

service execution means for executing the service  
20 by the telephone exchange apparatus and the computer  
apparatus on the basis of the media information  
communicated by said media information communication  
means.

2. An exchange system which comprises a telephone  
25 exchange apparatus to which at least one terminal  
device is connected, and a computer apparatus having  
a processing function of media information, comprising:

a media information communication path which connects the telephone exchange apparatus and the computer apparatus, and has a plurality of media information channels;

5           channel selection means, in at least one of the telephone exchange apparatus and the computer apparatus, for selecting an empty media information channel from the plurality of media information channels, when an execution request of a service  
10           associated with exchange using the media information is generated;

            media information communication means for communicating the media information between the telephone exchange apparatus and the computer apparatus  
15           via the media information channel selected by said channel selection means; and

            service execution means for executing the service by the telephone exchange apparatus and the computer apparatus on the basis of the media information  
20           communicated by said media information communication means.

3. An exchange system which comprises a telephone exchange apparatus, and a computer apparatus having a processing function of media information, comprising:

25           a communication path which is comprised of a control information communication path for communicating control information, and a media

information communication path for communicating the media information using a plurality of media information channels, and connects the telephone exchange apparatus and the computer apparatus;

5           channel selection means, in at least one of the telephone exchange apparatus and the computer apparatus, for communicating control information between the telephone exchange apparatus and the computer apparatus via the control information communication path, and selecting an empty media information channel from the plurality of media information channels in accordance with the control information communicated via the control information communication path, when an execution request of a service associated with exchange using the media information is generated;

10           media information communication means for communicating the media information between the telephone exchange apparatus and the computer apparatus via the media information channel selected by said channel selection means; and

15           service execution means for executing the service by the telephone exchange apparatus and the computer apparatus on the basis of the media information communicated by said media information communication means.

4. An exchange system which comprises a telephone

exchange apparatus, and a computer apparatus having  
a processing function of media information, comprising:

a media information communication path which  
connects the telephone exchange apparatus and the  
5 computer apparatus;

determination means, in at least one of the  
telephone exchange apparatus and the computer  
apparatus, for checking if the service is associated  
with the computer apparatus, when an execution request  
10 of a service associated with exchange using the media  
information is generated;

media information communication means for  
communicating the media information between the  
telephone exchange apparatus and the computer apparatus  
15 via said media information communication path, when  
said determination means determines that the service is  
associated with the computer apparatus; and

service execution means for executing the service  
by the telephone exchange apparatus and the computer  
20 apparatus on the basis of the media information  
communicated by said media information communication  
means.

5. An exchange system which comprises a telephone  
exchange apparatus, and a computer apparatus having  
25 a processing function of media information, comprising:

a media information communication path which  
connects the telephone exchange apparatus and the

computer apparatus;

communication means, in each of the telephone  
exchange apparatus and the computer apparatus, for  
communicating control information and the media  
5 information between the telephone exchange apparatus  
and the computer apparatus via said media information  
communication path, when a service request using the  
media information is generated; and

10 service execution means for executing the service  
by the telephone exchange apparatus and the computer  
apparatus on the basis of the control information and  
the media information communicated by said  
communication means.

15 6. An exchange system which comprises a telephone  
exchange apparatus to which at least one terminal  
device is connected, and a computer apparatus having  
a processing function of media information, comprising:

20 a media information communication path which  
connects the telephone exchange apparatus and the  
computer apparatus, and has at least one media  
information channel pre-assigned to the terminal  
device;

25 media information communication means, in each of  
the telephone exchange apparatus and the computer  
apparatus, for communicating the media information  
between the telephone exchange apparatus and the  
computer apparatus via the media information channel of

said media information communication path, when an execution request of a service associated with exchange using the media information is generated;

5 first service execution means, in the telephone exchange apparatus, for executing a part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means; and

10 second service execution means, in the computer apparatus, for executing another part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means.

15 7. An exchange system which comprises a telephone exchange apparatus to which at least one terminal device is connected, and a computer apparatus having a processing function of media information, comprising:

20 a media information communication path which connects the telephone exchange apparatus and the computer apparatus, and has a plurality of media information channels;

25 channel selection means, in at least one of the telephone exchange apparatus and the computer apparatus, for selecting an empty media information channel from the plurality of media information channels;

media information communication means for

communicating the media information between the telephone exchange apparatus and the computer apparatus via the media information channel selected by said channel selection means;

5           first service execution means, in the telephone exchange apparatus, for executing a part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means; and

10           second service execution means, in the computer apparatus, for executing another part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means.

15           8. An exchange system which comprises a telephone exchange apparatus, and a computer apparatus having a processing function of media information, comprising:

            a communication path which is comprised of a control information communication path for  
20           communicating control information, and a media information communication path for communicating media information using a plurality of media information channels, and connects the telephone exchange apparatus and the computer apparatus;

25           channel selection means, in at least one of the telephone exchange apparatus and the computer apparatus, for communicating the control information

between the telephone exchange apparatus and the computer apparatus via the control information communication path, and selecting an empty media information channel from the plurality of media information channels in accordance with the control information communicated via the control information communication path, when an execution request of a service associated with exchange using the media information is generated;

media information communication means for communicating the media information between the telephone exchange apparatus and the computer apparatus via the media information channel selected by said channel selection means; and

first service execution means, in the telephone exchange apparatus, for executing a part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means; and

second service execution means, in the computer apparatus, for executing another part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means.

9. An exchange system which comprises a telephone exchange apparatus, and a computer apparatus having a processing function of media information, comprising:



a media information communication path which connects the telephone exchange apparatus and the computer apparatus;

5       determination means, in at least one of the telephone exchange apparatus and the computer apparatus, for checking if the service is associated with the computer apparatus, when an execution request of a service associated with exchange using the media information is generated;

10       media information communication means for communicating the media information between the telephone exchange apparatus and the computer apparatus via said media information communication path, when said determination means determines that the service is  
15       associated with the computer apparatus;

20       first service execution means, in the telephone exchange apparatus, for executing a part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means; and

25       second service execution means, in the computer apparatus, for executing another part of the service associated with said execution request, on the basis of the media information communicated by said media information communication means.

10. An exchange system which comprises a telephone exchange apparatus, and a computer apparatus having

a processing function of media information, comprising:

a media information communication path which connects the telephone exchange apparatus and the computer apparatus;

5           communication means, in each of the telephone exchange apparatus and the computer apparatus, for communicating control information and the media information between the telephone exchange apparatus and the computer apparatus via said media information communication path, when an execution request of a  
10           service associated with exchange using the media information is generated;

            first service execution means, in the telephone exchange apparatus, for executing a part of the service  
15           associated with said execution request, on the basis of the media information communicated by said communication means; and

            second service execution means, in the computer apparatus, for executing another part of the service  
20           associated with said execution request, on the basis of the media information communicated by said communication means.

11. An exchange system according to any one of  
claims 6 to 10, wherein said first service execution  
25           means executes at least a dialing process including the service associated with said execution request, on the basis of the media information communicated by said

media information communication means; and

5       said second service execution means executes  
a process, excluding said dialing process associated  
with said execution request, on the basis of the media  
information communicated by said media information  
communication means.

10       12. A telephone exchange apparatus which is  
connected to a computer apparatus having a processing  
function of media information via a media information  
communication path having a plurality of media  
information channels pre-assigned to a plurality of  
terminal devices, comprising:

15       media information communication means for  
communicating the media information with the computer  
apparatus via the media information channels, when an  
execution request of a service associated with exchange  
using the media information is generated; and

20       service execution means for executing at least  
a part of the service on the basis of the media  
information communicated by said media information  
communication means.

25       13. A telephone exchange apparatus which is  
connected to a computer apparatus having a processing  
function of media information via a media information  
communication path having a plurality of media  
information channels, comprising:

channel selection means for selecting an empty

channel from the plurality of media information channels, when an execution request of a service associated with exchange of the media information is generated;

5           media information communication means for communicating the media information with the computer apparatus via the empty media information channel selected by said channel selection means; and

10           service execution means for executing at least a part of the service on the basis of the media information communicated by said media information communication means.

14. A telephone exchange apparatus which is connected to a computer apparatus having a processing  
15       function of media information via a control information communication path for communicating control information, and a media information communication path having a plurality of media information channels, comprising:

20           channel selection means for selecting an empty media information channel from the plurality of media information channels on the media information communication path, in accordance with the communicated control information to or from the computer apparatus via the control information communication path, when an  
25       execution request of a service associated with exchange of the media information is generated;

          media information communication means for

communicating the media information with the computer apparatus via the media information channel selected by said channel selection means; and

5        service execution means for executing at least  
a part of the service on the basis of the media  
information communicated by said media information  
communication means.

10        15. A telephone exchange apparatus which is  
connected to a computer apparatus having a processing  
function of media information via a media information  
communication path, comprising:

15        determination means for checking if the service is  
associated with the computer apparatus, when an  
execution request of a service associated with exchange  
of the media information is generated;

20        media information communication means for  
communicating the media information with the computer  
apparatus via the media information communication path,  
when said determination means determines that the  
service is associated with the computer apparatus; and

      service execution means for executing at least  
a part of the service on the basis of the media  
information communicated by said media information  
communication means.

25        16. A telephone exchange apparatus which is  
connected to a computer apparatus having a processing  
which is function of media information via a media

information communication path, comprising:

communication means for communicating control  
information and the media information with the computer  
apparatus via the media information communication path,  
5 when an execution request of a service associated with  
exchange of the media information is generated; and

service execution means for executing at least  
a part of the service on the basis of the control  
information and media information communicated by said  
10 communication means.

17. A computer apparatus which is connected to  
a telephone exchange apparatus, to which at least one  
terminal device is connected, via a media information  
communication path having a plurality of media  
15 information channels pre-assigned to the terminal  
device, comprising:

media information communication means for  
communicating the media information with the telephone  
exchange apparatus via the media information channels,  
20 when an execution request of a service associated with  
exchange using media information is generated; and

service execution means for executing at least  
a part of the service on the basis of the media  
information communicated by said media information  
25 communication means.

18. A computer apparatus which is connected to  
a telephone exchange apparatus, to which at least one

terminal device is connected, via a media information communication path having a plurality of media information channels, comprising:

channel selection means for selecting an empty  
5 media information channel from the plurality of media information channels, when an execution request of a service associated with exchange using media information is generated,;

media information communication means for  
10 communicating the media information via the media information channel selected by said channel selection means; and

service execution means for executing at least  
a part of the service on the basis of the media  
15 communicated received by said media information communication means.

19. A computer apparatus which is connected to a telephone exchange apparatus, to which at least one terminal device is connected, via a control  
20 information communication path for transmitting control information, and a media information communication path having a plurality of media information channels, comprising:

channel selection means for selecting an empty  
25 media information channel from the plurality of media information channels on the media information communication path in accordance with communicating

control information to or from the telephone exchange apparatus via the control information communication path, when an execution request of a service associated with exchange using media information is generated,;

5           media information communication means for communicating the media information with the telephone exchange apparatus via the media information channel selected by said channel selection means; and

10           service execution means for executing at least a part of the service on the basis of the media information communicated by said media information communication means.

20. A computer apparatus which is connected to a telephone exchange apparatus, to which at least one terminal device is connected, via a media information communication path, comprising:

15           determination means for checking if the service is associated with the self apparatus, when an execution request of a service associated with exchange using media information is generated;

20           media information communication means for communicating the media information with the telephone exchange apparatus via the media information communication path, when said determination means determines that the service is associated with the self apparatus; and

          service execution means for executing at least



a part of the service on the basis of the media information communicated by said media information communication means.

21. A computer apparatus which is connected to  
5 a telephone exchange apparatus, to which at least one terminal device is connected, via a media information communication path, comprising:

communication means for communicating control  
information and media information with the telephone  
10 exchange apparatus via the media information communication path, when an execution request of a service associated with exchange using media information is generated; and

service execution means for executing at least  
15 a part of the service on the basis of the control information and the media information communicated by said communication means.

22. An exchange system which comprises a telephone  
exchange apparatus to which at least one terminal  
20 device is connected, and a computer apparatus having a processing function of media information, comprising:

a media information communication path which  
connects the telephone exchange apparatus and the  
computer apparatus, and has at least one media  
25 information channel pre-assigned to the terminal device;

media information communicator in each of the

telephone exchange apparatus and the computer apparatus, for, communicating the media information between the telephone exchange apparatus and the computer apparatus via the media information channel of said media information communication path, when an execution request of a service associated with exchange using the media information is generated; and

service executer for executing the service by the telephone exchange apparatus and the computer apparatus on the basis of the media information communicated by said media information communicator.

23. An exchange system which comprises a telephone exchange apparatus to which at least one terminal device is connected, and a computer apparatus having a processing function of media information, comprising:

a media information communication path which connects the telephone exchange apparatus and the computer apparatus, and has a plurality of media information channels;

channel selector, in at least one of the telephone exchange apparatus and the computer apparatus, for, selecting an empty media information channel from the plurality of media information channels, when an execution request of a service associated with exchange using the media information is generated;

media information communicator for communicating the media information between the telephone exchange

apparatus and the computer apparatus via the media information channel selected by said channel selector; and

5 service executer for executing the service by the telephone exchange apparatus and the computer apparatus on the basis of the media information communicated by said media information communicator.

24. An exchange system which comprises a telephone exchange apparatus, and a computer apparatus having  
10 a processing function of media information, comprising:

a communication path which is comprised of a control information communication path for communicating control information, and a media information communication path for communicating the  
15 media information using a plurality of media information channels, and connects the telephone exchange apparatus and the computer apparatus;

channel selector, in at least one of the telephone exchange apparatus and the computer apparatus, for  
20 communicating control information between the telephone exchange apparatus and the computer apparatus via the control information communication path, when an execution request of a service associated with exchange using the media information is generated, and selecting  
25 an empty media information channel from the plurality of media information channels in accordance with the control information communicated via the control

information communication path;

media information communicator for communicating the media information between the telephone exchange apparatus and the computer apparatus via the media

5 information channel selected by said channel selector;  
and

service executer for executing the service by the telephone exchange apparatus and the computer apparatus on the basis of the media information communicated by  
10 said media information communicator.

25. An exchange system which comprises a telephone exchange apparatus, and a computer apparatus having a processing function of media information, comprising:

a media information communication path which  
15 connects the telephone exchange apparatus and the computer apparatus;

determinater, in at least one of the telephone exchange apparatus and the computer apparatus, for checking if the service is associated with the computer  
20 apparatus, when an execution request of a service associated with exchange using the media information is generated;

media information communicator for communicating the media information between the telephone exchange  
25 apparatus and the computer apparatus via said media information communication path, when said determinater determines that the service is associated with the

computer apparatus; and

service executer for executing the service by the  
telephone exchange apparatus and the computer apparatus  
on the basis of the media information communicated by  
5 said media information communicator.

26. An exchange system which comprises a telephone  
exchange apparatus, and a computer apparatus having  
a processing function of media information, comprising:

a media information communication path which  
10 connects the telephone exchange apparatus and the  
computer apparatus;

communicator, in each of the telephone exchange  
apparatus and the computer apparatus, for communicating  
control information and the media information between  
15 the telephone exchange apparatus and the computer  
apparatus via said media information communication  
path, when a service request using the media  
information is generated; and

service executer for executing the service by the  
20 telephone exchange apparatus and the computer apparatus  
on the basis of the control information and the media  
information communicated by said communicator.

27. An exchange system which comprises a telephone  
exchange apparatus to which a plurality of terminal  
25 devices are connected, and a computer apparatus,  
comprising:

a media information communication path for

connecting the telephone exchange apparatus and  
the computer apparatus;

transfer means of the telephone exchange apparatus  
for transferring the voice signal to the computer  
5 apparatus via said media information communication  
path, when a voice signal is sent from one of the  
plurality of terminal devices;

speech recognition means of the computer apparatus  
for recognizing contents of the voice signal  
10 transferred by said transfer means; and

dialing means of the telephone exchange apparatus  
for executing a dialing process to another terminal  
device on the basis of a speech recognition result.

28. A telephone exchange apparatus which is  
15 connected to a computer apparatus having a speech  
recognition function via a media information  
communication path, and to which a plurality of  
terminal devices are connected, comprising:

transfer means for transferring the voice signal  
20 to the computer apparatus via the media information  
communication path, when a voice signal is sent from  
one of the plurality of terminal devices; and

dialing means for executing a dialing process to  
another terminal device on the basis of a speech  
25 recognition result of the computer apparatus.

29. A computer apparatus which is connected to  
a telephone exchange apparatus, to which a plurality of

terminal devices are connected, via a media information communication path, comprising:

speech recognition means for recognizing contents of the voice signal, when a voice signal comes from the telephone exchange apparatus via the media information communication path; and

transfer means for transferring a speech recognition result of said speech recognition means to the telephone exchange apparatus via the media information communication path, and making the telephone exchange apparatus execute a dialing process to another terminal device.